

REMARKS

Generally

To anticipate a claim, the reference must teach every element of the claim. MPEP 2131.01. In rejecting most claims in the application, the Office Action (OA) mischaracterizes the technology disclosed by the references:

- U.S. Patent No. 5,995,959 Method and System for Network information access to Friedman et al. [FRIEDMAN];
- Banks and Lizza in *Pilot's Associate – A Cooperative Knowledge-Based System Application*, DARPA Strategic Initiative, IEEE Expert, June 1991 [BANKS]; and
- U.S. Patent No. 5,809,212 Conditional Transitions Networks and Computational Processes for Use Interactive Computer-Based Systems, to Shasha [SHASHA]

to find claim elements not present in the references.

Regarding the Claim Rejections Under 35 U.S.C. § 102 as Anticipated by FRIEDMAN.

Regarding Claim 1 and claims dependent thereon, FRIEDMAN does not teach every element of Claim 1.

The OA asserts that FRIEDMAN's information sources is equivalent to a *knowledge base* as claimed in the application.

The OA ignores the explicit definition of *knowledge base* provided in the written description, i.e.:

Knowledge Base: a collection of knowledge (e.g., objects, concepts, relationships, facts, rules, etc.) expressed in a manner such that it can be used by an inference engine. For example, a knowledge base may include rules and facts or assertions as in traditional expert systems.

FRIEDMAN's "information sources" do not qualify as *knowledge bases* under this definition, nor under any other definitions known to those skilled in the art. Throughout FRIEDMAN's disclosure, information sources respond to queries with data - they do not contain rules that can be used by an inference engine, as claimed in the application. FRIEDMAN discloses no relationship between his information sources and an *inference engine* as is required by the definition of a *knowledge base* in the present application.

The OA asserts that FRIEDMAN's SUB-PROCEDURE FINDSOLUTIONS is equivalent to an *inference engine* as claimed in the application.

The OA ignores the explicit definition of *inference engine* provided in the written description, i.e.:

Inference Engine: a computer program that infers new facts or beliefs using a knowledge base and a set of logical operators.

FRIEDMAN's SUB-PROCEDURE FINDSOLUTIONS is not an expert system and does not use a knowledge base. Interestingly, FRIEDMAN's SUB-PROCEDURE FINDSOLUTIONS has no interaction whatsoever with information sources 28, 29, or 30 from Fig. 2 - even though the OA repeatedly asserts that these information sources are *knowledge bases* (and by the definition of the written description, an *inference engines* must interact with a *knowledge base*). It is quite clear from FRIEDMAN's TABLE C and the accompanying description that FRIEDMAN's SUB-PROCEDURE FINDSOLUTIONS operates **only** on a user query, using operators, to produce a set of queries (a plan in FRIEDMAN's lexicon). That the OA speculates FINDSOLUTIONS **would** interface with the information sources is not sufficient basis to support a rejection.

The OA cites: FRIEDMAN C04L47-50

These data structures are typically stored for access by the methods of this invention in storage device 8 attached to access system 2, where these methods are executed for providing assistance to user 1. C03L47-53 FIG. 1 illustrates the environment of this invention. User 1 is attached to access system 2 by link 6. Access system 2 can be either local to, or remote from, user 1, with link 6 providing appropriate communication between the user and the access system. Access system 2 is connected to a plurality of information sources, such as sources 3, 4, and 5, by interconnection 7.

and FRIEDMAN C09L53-55

This embodiment generally employs a forward -chaining methodology to search from a set of operators, which describe available information sources, to a goal, which is a plan "solving" the query in terms of these information sources.

The OA asserts that this disclosure corresponds to a *management system that collects and distributes data and determines one or more goals.*

The access system 2 of FRIEDMAN cannot be seen as a *management system that collects and distributes data* as claimed in the application. The cited portions of FRIEDMAN clearly describe the access system 2 as the platform where methods of FRIEDMAN's invention (translating a single query into a set of individual queries targeted to one or more information sources 3, 4, 5) are executed. No data is *collected*; no data is *distributed*. Further, FRIEDMAN does not disclose *determining a goal*. Goal, as used in FRIEDMAN, is a plan for searching information sources, not a *user's goal* that is **determined with assistance from the invention**, as claimed. FRIEDMAN requires that the user provide the user's goal without assistance from the invention in determining the goal. The present application discloses and claims determining a goal for a supply chain operator as part of the invention.

In summary with regard to Claim 1:

- FRIEDMAN's information sources **are not** equivalent to a *knowledge base*;
- FRIEDMAN's SUB-PROCEDURE FINDSOLUTIONS **is not** equivalent to an *inference engine*; and
- FRIEDMAN **does not** contain disclosure corresponding to a *management system* that *collects and distributes data* and *determines one or more goals*.

In light of the fact that none of these claim limitations is disclosed by the reference, the undersigned respectfully requests that the rejection be withdrawn. The undersigned notes that the failure of any **one** assertion is sufficient to prevent establishment of a *prima facie* case of obviousness under 35 U.S.C. § 103.

Regarding Claim 9, FRIEDMAN does not teach every element of the claim.

With respect to Claim 1, the OA asserts that FRIEDMAN's information sources is equivalent to a *knowledge base* as claimed in the application. The OA now asserts that entries in FRIEDMAN TABLE 1 are *scripts* included in the *knowledge base*/information sources. By its own definition, FRIEDMAN TABLE 1 shows

the number of sequences explored <in an experiment used on Occam>
and the time taken for each experiment.

First, the cited table does not contain *scripts*, it contains experimental data. Second, the experimental data is not part of one of FRIEDMAN's information sources - ergo, the experimental data (which is not a *script*) is also not part of a *knowledge base*.

Regarding Claim 10, FRIEDMAN does not teach every element of the claim.

In rejecting Claim 10 based on FRIEDMAN C07 L50-51, the OA ignores the definition of *intent interpreter* given in the application at P12 L14-15, i.e.,

Intent Interpreter: an expert system that uses a knowledge base to determine the present intention of a user or a system.

Neither the referenced lines of FRIEDMAN, nor any other portion of FRIEDMAN, discloses **determining the intent of a user or system** - through use of a knowledge base or otherwise. The referenced lines note that schema can be interpreted either procedurally (order of operations are important) or logically without regard to the order of operations. This "interpretation" is wholly unrelated to determining the intent of an operator or system using a knowledge base.

Regarding Claim 11, FRIEDMAN does not teach every element of the claim.

The OA cites the following section of SHASHA:

However, in a nonmonotonic truth maintenance system this conclusion <'Tweety can fly' based on knowing that 'Tweety is a bird'> will be discarded if the system acquires the fact that 'Tweety is a penguin'. Thus, 'Non-monotonic' systems allow the drawing of believed conclusions that may later be retracted." C03 L38-42 <parenthetical added for clarity>.

SHASHA does not teach the use of truth maintenance systems in as claimed. SHASHA merely provides an example and some background on non-monotonic truth maintenance systems. There is no suggestion in SHASHA or FRIEDMAN to use a non-monotonic truth maintenance system to create a plan to satisfy the determined goal, as claimed in the present application. In addition, the limitations of this claim clearly show a distinction between the plan and the determined goal. This is counter to FRIEDMAN where the plan is the goal.

Regarding Claim 16, FRIEDMAN does not teach every element of the claim.

In rejecting Claim 16 based on FRIEDMAN C16 L22-25, the OA ignores the definition of *partial order planner* and *least commitment planner* given in the application at P13 L07-08, i.e.,

Partial Order Planner: a process that generates a partially ordered set of activities at the completion of the planning process;

and at P12 C20 - P13 C04, i.e.,

Least Commitment Planner: a process that generates a plan that avoids making a choice between two or more alternate courses of action unless it is necessary to do so. A least commitment planner avoids definitizing any particular sub-element of a plan beyond the minimum necessary to determine likely success. Final definitization of the primitive steps is deferred until just prior to the execution of each plan sub-element by a plan execution agent.

Specifically, a sound, **complete**, partial order planner (as cited in FRIEDMAN) is not a *least commitment planner*. Not all partial order planners are least commitment planners. A partial order planner is different from least commitment planner. "Ordering" refers to the degree to which the planner sequences the elements of the plan. "Full order" means fully sequenced (e.g., A1, then A2, then A3, then A4, etc.) "Partial order" means that the planner might know that A1 must precede A4, and that the rest will be done whenever. "Least commitment" refers to the planner's reluctance to commit (i.e., execute) any plan until it is necessary to do so (i.e., until the time is right).

Regarding Claim 17 and claims dependent thereon, FRIEDMAN does not teach every element of the claim.

The OA cites the following section of FRIEDMAN: C09 L52-56:

This embodiment generally employs a forward chaining methodology to search from a set of operators, which describe available information sources, to a goal, which is a plan "solving" the query terms of these information sources.

FRIEDMAN does not disclose determining a goal for a supply chain participant, as claimed. Goal, as used in FRIEDMAN, is a plan for searching information sources, not a user's

goal that is determined with assistance from the invention, as claimed. FRIEDMAN requires that the user provide the user's goal without assistance from the invention in determining the goal. The present application discloses and claims determining a goal for a supply chain operator as part of the invention.

The OA cites multiple information sources (Fig. 2 28, 29, 30) from FRIEDMAN, and the following pertinent text:

In this case, the plan specifies access to information source A 28, source B 29, and source C 30." C08 L48 -50; "An alternate embodiment ... starts from the goal, the user information query ... This method described is a ... partial order planner ... For the description of this alternative method ... a user information query is taken to be a conjunction of predicates together with a list of variables and an indication for each whether it is bound or unbound. Execution of the instantiated queries ... is partially ordered by two types of point truth constants, one representing the binding patterns of the variable in a predicate and another representing true predicates ... A partial plan is a list comprising, in order: actions; unsolved goals... unbound variables ... ordering constraints for actions; and variable bindings. A plan without any unsolved goals is a solution of the user information query.

The OA ignores the explicit definition of knowledge base provided in the written description, i.e.:

Knowledge Base: a collection of knowledge (e.g., objects, concepts, relationships, facts, rules, etc.) expressed in a manner such that it can be used by an inference engine. For example, a knowledge base may include rules and facts or assertions as in traditional expert systems.

FRIEDMAN's information sources do not qualify as knowledge bases under this definition, nor under any other definitions known to those skilled in the art. Throughout FRIEDMAN's disclosure, information sources respond to queries with data - they do not contain rules that can be used by an inference engine, as claimed in the application. FRIEDMAN discloses no

relationship between his information sources and an inference engine as is required by the definition of a knowledge base in the present application.

Regarding Claim 18 and claims dependent thereon, FRIEDMAN does not teach every element of the claim.

In rejecting Claim 18 based on FRIEDMAN C16 L22-25, the OA ignores the definition of *partial order planner* and *least commitment planner* given in the application at P13 L07-08, i.e.,

Partial Order Planner: a process that generates a partially ordered set of activities at the completion of the planning process;

and at P12 C20 - P13 C04, i.e.,

Least Commitment Planner: a process that generates a plan that avoids making a choice between two or more alternate courses of action unless it is necessary to do so. A least commitment planner avoids definitizing any particular sub-element of a plan beyond the minimum necessary to determine likely success. Final definitization of the primitive steps is deferred until just prior to the execution of each plan sub-element by a plan execution agent.

Specifically, a sound, **complete**, partial order planner (as cited in FRIEDMAN) is not a *least commitment planner*. Not all partial order planners are least commitment planners. A partial order planner is different from least commitment planner. "Ordering" refers to the degree to which the planner sequences the elements of the plan. "Full order" means fully sequenced (e.g., A1, then A2, then A3, then A4, etc.) "Partial order" means that the planner might know that A1 must precede A4, and that the rest will be done whenever. "Least commitment" refers to the planner's reluctance to commit (i.e., execute) any plan until it is necessary to do so (i.e., until the time is right).

Regarding Claim 19, FRIEDMAN does not teach every element of the claim.

In rejecting Claim 19 based on FRIEDMAN C16 L22-25, the OA ignores the definition of *partial order planner* and *least commitment planner* given in the application at P13 L07-08, i.e.,

Partial Order Planner: a process that generates a partially ordered set of activities at the completion of the planning process;

and at P12 C20 - P13 C04, i.e.,

Least Commitment Planner: a process that generates a plan that avoids making a choice between two or more alternate courses of action unless it is necessary to do so. A least commitment planner avoids definitizing any particular sub-element of a plan beyond the minimum necessary to determine likely success. Final definitization of the primitive steps is deferred until just prior to the execution of each plan sub-element by a plan execution agent.

Specifically, a sound, **complete**, partial order planner (as cited in FRIEDMAN) is not a *least commitment planner*. Not all partial order planners are least commitment planners. A partial order planner is different from least commitment planner. "Ordering" refers to the degree to which the planner sequences the elements of the plan. "Full order" means fully sequenced (e.g., A1, then A2, then A3, then A4, etc.) "Partial order" means that the planner might know that A1 must precede A4, and that the rest will be done whenever. "Least commitment" refers to the planner's reluctance to commit (i.e., execute) any plan until it is necessary to do so (i.e., until the time is right).

Regarding Claim 23 and claims dependent thereon, FRIEDMAN does not teach every element of the claim.

The OA asserts:

As discussed above Friedman et al's information sources 28 - 30, Fig. 2 are knowledge bases or databases of knowledge, a user would store above discussed concept graphs in said information sources or knowledge bases.

As explained above with regard to at least Claim 1, FRIEDMAN's information sources are not equivalent to a *knowledge base* as claimed in the application.

The OA asserts that the following portion of FRIEDMAN,

<information> [s]ources are managed by different organizations, hence agents, whether human or automated, must adhere to the remotely defined formats <to query the information sources> C01 L33-35 <parenthetical added> ,

when read with C01 L14-17

The field of this invention relates to information access over networks, and specifically to the automatic location and retrieval of information available from networked information sources in response to user information queries,"

and when read with C09 L32-C12 L39 and PROCEDURE OCCAM constitute disclose of *intelligent agents*.

C09 L32-C12 L39, PROCEDURE OCCAM, and C01 L14-17 contain no instances of the words "agent" or "intelligent." Further, C01 L33-35's use of "agent" is unrelated to the other sections cited in the OA.

The initial reference to *agents* identifies the entities that operate information sources outside FRIEDMAN's invention. These entities have no role in FRIEDMAN's disclosure. The FIELD OF THE INVENTION from FRIEDMAN adds nothing relevant to *intelligent agents* C01 L33-35. Second, C09 L32-C12 L39 contains no instances of the words "agent" or "intelligent"; it contains reference to pseudo-code that comprises ordinary algorithms, not intelligent agents. Occurrence of the word "agent" in one portion of the application, and the stretch to identify an ordinary algorithm (an algorithm: completely unrelated to the other use of "agent"; and without a single reference to intelligent agents) fails completely as the basis for anticipation of Claim 23.

In addition, the OA asserts the rejection of Claim 1 against this claim. The undersigned re-asserts that the rejection is invalid for the reasons cited in the Remarks directed to Claim 1.

Regarding Claim 25 and claims dependent thereon, FRIEDMAN does not teach every element of the claim.

The OA re-asserts the rejections against Claims 23a) and 10 above in rejecting Claim 25. The undersigned requests that this rejection be withdrawn for the same reasons given in the Remarks pertaining to Claims 10 and 23 above.

Regarding Claim 26 FRIEDMAN does not teach every element of the claim.

The OA asserts that checking for duplicated instances of steps in a plan of a single user, as disclosed in FRIEDMAN, anticipates the detection of conflicts among users, as claimed in the

application. The checking for duplication in FRIEDMAN is not equivalent to checking for conflict among the plans of several users, as claimed in the application. Duplication in FRIEDMAN is not a matter of conflict, but a matter of procedure optimization. See FRIEDMAN C14 L01. For example: "Duplicated operator instance pruning eliminates redundant instances." A "operator instance" (an addition to the query plan) is "rejected" (not appended to the query) "... if the operator instance has the same bound arguments as an existing step, since executing the same operator twice will not return any new tuples." See FRIEDMAN C14 L26-29.

Regarding the Claim Rejections Under 35 U.S.C. § 103 as unpatentable over FRIEDMAN in view of BANKS.

Regarding Claim 2 as unpatentable over FRIEDMAN in view of BANKS.

The OA asserts that BANKS' use of plan goal graphs can be combined with FRIEDMAN's use of a knowledge base to render Claim 2 obvious.

First, as noted in the Remarks directed to the OA's rejection of Claim 1, FRIEDMAN's information sources are not a knowledge base as the term is used in the application. Second, neither BANKS nor FRIEDMAN teaches the use of plan goal graphs in conjunction with a knowledge base as claimed.

BANKS teaches the use of a plan-goal graph as an integration or data dictionary mechanism, not in conjunction with a knowledge base. In other words, BANKS' system consists of a set of modules that exchange messages among themselves. These messages are based on the plan-goal graph. For example, one module might send the message instance "Aircraft #1 will attack Target #42," where "#1" and "#42" are specifics that the module filled in. The plan-goal graph would contain the generic plan "Aircraft ? will attack Target ?." BANKS teaches that the plan-goal graph is a way for a module designer to describe the messages that the module would send and to know (and design for) the messages that the module would receive.

Regarding Claim 3 and claims dependent thereon, as unpatentable over FRIEDMAN in view of BANKS.

The OA asserts that BANKS discloses one or more *concept graphs* included in the *knowledge base* (P23 C01 L25-28). At the referenced portion, BANKS states:

The need to continue the graph concept led to the development of automated tools to maintain and update its structure and dictionary.

Earlier in the reference paragraph, the words to which graph concept refers are clearly shown as:

The plan-and-goal graph and dictionary remained, increasing in importance. As system functionality grew, a common language dealing with system plans and goals proved necessary. However, updating graph information became cumbersome as development continued and as the functionality represented by the graph increased. The need to continue the graph concept led to the development of automated tools to maintain and update its structure and dictionary.

This clearly shows that graph concept does not refer to *concept graphs*, and clearly has no relation to a *knowledge base*. Note that the OA asserts that FRIEDMAN's information sources correspond to *knowledge bases* as claimed, but the OA neglects to connect these information sources/knowledge bases to *concept graphs* as claimed here.

Regarding Claim 4 and claims dependent thereon as unpatentable over FRIEDMAN in view of BANKS.

The OA asserts that FRIEDMAN's SUB-PROCEDURE FINDSOLUTIONS is an *inference engine* as claimed in the application. The OA ignores the explicit definition of *inference engine* provided in the written description, i.e.:

Inference Engine: a computer program that infers new facts or beliefs using a knowledge base and a set of logical operators.

FRIEDMAN's SUB-PROCEDURE FINDSOLUTIONS is not an expert system and does not use a knowledge base. Interestingly, FRIEDMAN's SUB-PROCEDURE FINDSOLUTIONS has no interaction whatsoever with information sources₂₈, 29, or 30 from Fig. 2 - even though the OA repeatedly asserts that these information sources are *knowledge bases* (and by the definition of the written description, an *inference engines* must interact with a *knowledge base*). It is quite clear from FRIEDMAN TABLE C and the accompanying description that FRIEDMAN's SUB-PROCEDURE FINDSOLUTIONS operates only on a user query, using operators, to produce a set of queries (a plan in FRIEDMAN's lexicon). That the OA speculates FINDSOLUTIONS **would** interface with the information sources is not sufficient basis to support a rejection.

Regarding Claim 6 and claims dependent thereon, as unpatentable over FRIEDMAN in view of BANKS

The OA asserts that FRIEDMAN's FINDSOLUTION is an *inference engine* and that FRIEDMAN's information state is the *life cycle state* of a *plan instance*. The OA asserts that sound, complete, and free of threats is *commitment level* as claimed in the present application. The cited section of FRIEDMAN actually reads:

An alternative embodiment ... This method described is a sound, complete, partial -order planner, which is also free of threats and does not require consistency checking.

The OA also asserts that the title alone of a 1991 paper on commitment strategies indicates that *commitment levels* are inherent in FRIEDMAN.

First, FRIEDMAN's FINDSOLUTION is not an *inference engine* (see earlier Remarks directed to Claim 1 rejections). Second, in Figure 6 and beginning on page 21 of the written description, the application clearly identifies attributes of the *life cycle state* of a *plan*. None of these attributes (e.g., *proposed*, *accepted*, *ready to start*, *revoked*), nor anything like them, are found in FRIEDMAN - making it clear that FRIEDMAN's information state is unrelated to the *life cycle state* of a *plan*. These same sections of the application make it clear that sound, complete, and free of threats are not *commitment levels*. Further, the OA attempts to combine features of

different embodiments (sound, complete, and free of threats is from the alternative embodiment in FRIEDMAN) without any indication that an operable system results.

Regarding Claim 7 and claims dependent thereon, as unpatentable over FRIEDMAN in view of BANKS.

The OA relies on an earlier assertion that FRIEDMAN discloses the use of an *inference engine, monitoring, and life cycle states*. The OA then cites BANKS for teaching *concept graphs* in order to state a case of obviousness against Claim 7. The OA fails to state a case of obviousness from at least three perspectives: 1) FRIEDMAN does not teach or suggest the alleged elements or their combined use - as explained above; 2) BANKS does not teach or suggest concept graphs; and 3) even if BANKS did teach concept graphs, there is no teaching or suggestion to use concept graphs in the fashion claimed.

BANKS, at P23 C01 L25-28, specifically discloses the need to continue the graph concept led to the development of automated tools ... This reference, the only portion of BANKS to mention the words "concept" and "graph" in the same sentence, is completely unrelated to the use of concept graphs.

Regarding Claim 8 as unpatentable over FRIEDMAN in view of BANKS.

Rejecting a query as redundant (what FRIEDMAN discloses), does not amount to *determining further processing based on monitoring a situation*. Comparing a candidate query with those already in a solution set does not amount to *monitoring a situation*. FRIEDMAN discloses no monitoring. Deciding whether to abandon a query as redundant does not amount to *processing* the query.

Regarding Claim 21 as unpatentable over FRIEDMAN in view of BANKS.

The OA asserts that BANKS' use of plan goal graphs can be combined with FRIEDMAN's use of a knowledge base to render Claim 21 obvious.

First, as noted in the Remarks directed to the OA's rejection of Claim 1, FRIEDMAN's information sources are not a knowledge base as the term is used in the application. Second,

neither BANKS nor FRIEDMAN teaches the use of plan goal graphs in conjunction with a knowledge base as claimed.

BANKS teaches the use of a plan-goal graph as an integration or data dictionary mechanism, not in conjunction with a knowledge base. In other words, BANKS' system consists of a set of modules that exchange messages among themselves. These messages are based on the plan-goal graph. For example, one module might send the message instance "Aircraft #1 will attack Target #42," where "#1" and "#42" are specifics that the module filled in. The plan-goal graph would contain the generic plan "Aircraft ? will attack Target ?." BANKS teaches that the plan-goal graph is a way for a module designer to describe the messages that the module would send and to know (and design for) the messages that the module would receive.

Regarding Claim 22 as unpatentable over FRIEDMAN in view of BANKS.

The OA asserts that BANKS discloses one or more *concept graphs* included in the *knowledge base* (P23 C01 L25-28). At the referenced portion, BANKS states:

The need to continue the graph concept led to the development of automated tools to maintain and update its structure and dictionary.

Earlier in the reference paragraph, the words to which graph concept refers are clearly shown as:

The plan-and-goal graph and dictionary remained, increasing in importance. As system functionality grew, a common language dealing with system plans and goals proved necessary. However, updating graph information became cumbersome as development continued and as the functionality represented by the graph increased. The need to continue the graph concept led to the development of automated tools to maintain and update its structure and dictionary.

This clearly shows that graph concept does not refer to *concept graphs*, and clearly has no relation to a *knowledge base*. Note that the OA asserts that FRIEDMAN's information

sources correspond to *knowledge bases* as claimed, but the OA neglects to connect these information sources/*knowledge bases* to *concept graphs* as claimed here.

Regarding Claim 24 and claims dependent thereon, as unpatentable over FRIEDMAN in view of BANKS.

The OA asserts that FRIEDMAN's information sources is equivalent to a *knowledge base* as claimed in the application.

The OA ignores the explicit definition of *knowledge base* provided in the written description, i.e.:

Knowledge Base: a collection of knowledge (e.g., objects, concepts, relationships, facts, rules, etc.) expressed in a manner such that it can be used by an inference engine. For example, a knowledge base may include rules and facts or assertions as in traditional expert systems.

FRIEDMAN's "information sources" do not qualify as *knowledge bases* under this definition, nor under any other definitions known to those skilled in the art. Throughout FRIEDMAN's disclosure, information sources respond to queries with data - they do not contain rules that can be used by an inference engine, as claimed in the application. FRIEDMAN discloses no relationship between his information sources and an *inference engine* as is required by the definition of a *knowledge base* in the present application.

Regarding the Claim Rejections Under 35 U.S.C. § 103 as unpatentable over FRIEDMAN in view of SHASHA.

Regarding Claim 11 as unpatentable over FRIEDMAN in view of SHASHA.

The OA cites the following section of SHASHA:

However, in a nonmonotonic truth maintenance system this conclusion <'Tweety can fly' based on knowing that 'Tweety is a bird'> will be discarded if the system acquires the fact that 'Tweety is a penguin'. Thus, 'Non-monotonic' systems allow the drawing of believed conclusions that may

later be retracted . C03 L38 -42 < parenthetical added for clarity>.

SHASHA does not teach the use of truth maintenance systems in as claimed. SHASHA merely provides an example and some background on non-monotonic truth maintenance systems. There is no suggestion in SHASHA or FRIEDMAN to use a non-monotonic truth maintenance system to create a plan to satisfy the determined goal, as claimed in the present application. In addition, the limitations of this claim clearly show a distinction between the plan and the determined goal. This is counter to FRIEDMAN where the plan is the goal.

Regarding Claim 20 as unpatentable over FRIEDMAN in view of SHASHA.

The OA cites the following section of SHASHA:

However, in a nonmonotonic truth maintenance system this conclusion <'Tweety can fly' based on knowing that 'Tweety is a bird'> will be discarded if the system acquires the fact that 'Tweety is a penguin'. Thus, 'Non-monotonic' systems allow the drawing of believed conclusions that may later be retracted . C03 L38 -42 < parenthetical added for clarity>.

SHASHA does not teach the use of truth maintenance systems in as claimed. SHASHA merely provides an example and some background on non-monotonic truth maintenance systems. There is no suggestion in SHASHA or FRIEDMAN to use a non-monotonic truth maintenance system to create a plan to satisfy the determined goal, as claimed in the present application. In addition, the limitations of this claim clearly show a distinction between the plan and the determined goal. This is counter to FRIEDMAN where the plan is the goal.

Regarding the Claim Rejections Under 35 U.S.C. § 103 as unpatentable over FRIEDMAN in view of BANKS and SHASHA.

Regarding Claim 5 as unpatentable over FRIEDMAN in view of SHASHA and BANKS.

In addition to earlier remarks noting that FRIEDMAN does not teach or suggest *plan instances* created by an *inference engine*. The OA cites the following section of SHASHA:

However, in a nonmonotonic truth maintenance system this conclusion <'Tweety can fly' based on knowing that 'Tweety is a bird'> will be discarded if the system acquires the fact that 'Tweety is a penguin'. Thus, 'Non -monotonic' systems allow the drawing of believed conclusions that may later be retracted. " C03 L38-42 <parenthetical added for clarity>.

SHASHA does not teach the use of a non-monotonic model of economic benefit in a supply chain management system as claimed. SHASHA merely provides an example and some background on non-monotonic truth maintenance systems. There is no suggestion in SHASHA, FRIEDMAN, or BANKS to use a non-monotonic model of economic benefit as claimed in the present application. In addition, the limitations of this claim clearly show a distinction between the plan and the determined goal. This is counter to FRIEDMAN where the plan is the goal.

CONCLUSION

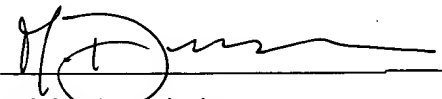
With consideration of the above remarks, the undersigned submits that this application is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that the prosecution might be advanced by discussing the application with the undersigned, in person or over the telephone, we would welcome the opportunity to do so.

Respectfully submitted,

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